

The conservation history of the Sumatran rhino (*Dicerorhinus sumatrensis*) - a story of success?

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Effective conservation of endangered species requires a thorough understanding of their ecological needs and geographic distribution. Yet, this information is still lacking for a variety of endangered species, such as the Sumatran rhinoceros (*Dicerorhinus sumatrensis*).

The Sumatran rhino is the most endangered of all rhino species. Its worldwide population has declined by more than 50 % over the last 20 years and less than 100 Sumatran rhinos are estimated to survive in very small and highly fragmented populations in Sumatra and Kalimantan in Indonesia and in Sabah, Malaysia (www.rhinos.org). Despite the intensive research on Sumatran rhinos in the past, the exact number of remaining rhinos, their sex and age ratio, movement patterns and habitat requirements is currently not known. This lack of data makes the conservation of the species challenging. Their numbers are often overestimated and conservation measures such as the translocation of isolated individuals to suitable locations to maximise conceptions are urgently required but are being delayed. Currently new conservation strategies are planned in Indonesia to save the remaining Sumatran rhinos from extinction. I therefore want to give an overview of the work conducted on Sumatran rhinos in the past 30 years, to document efforts to conserve the species, including the captive breeding programmes. More than 30 years have passed since the first rhinos were captured for an intensive breeding programme in the mid 1980's. Individual rhinos from Indonesia and Malaysia were translocated to zoos and breeding centers worldwide but their reproductive success was very low. Few individuals have reproduced so far, only four juveniles have been born and one of them died recently due to nutritional problems. Basic data about the species in terms of food, health and breeding behaviour are also needed for the captive breeding programme of the Sumatran rhinos. Here, I will summarise the past experiences showing that intensive management, experienced and well trained staff, knowledge of ecological factors as well as state-of-the-art reproductive management with assisted reproduction techniques is needed in order to promote reproduction. The next few years are crucial for the survival of the species. Governments, NGO's and scientists need to work closely together, and combine past experiences together with scientific data to develop targeted conservation measures.